

CMOS 8-bit Single Chip Microcomputer

Piggyback/
evaluator type**Description**

The CXP84600 is a CMOS 8-bit single chip micro-computer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP84632/84640/84648.

Features

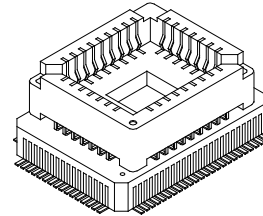
- A wide instruction set (213 instructions) which covers various types of data
 - 16-bit operation/multiplication and division/
Boolean bit operation instructions
- Minimum instruction cycle
 - 250ns at 16MHz operation (4.5 to 5.5V)
 - 333ns at 12MHz operation (3.0 to 5.5V)
 - 122 μ s at 32kHz operation (2.7 to 5.5V)
- Applicable EPROM LCC type 27C512 (Maximum 60K bytes are available.)
- Incorporated RAM capacity 2048 bytes
- Peripheral functions
 - A/D converter 8 bits, 8 channels, successive approximation method
(Conversion time of 20 μ s at 16MHz)
 - Serial interface Start-stop synchronization (UART), 1 channel
Incorporated buffer RAM (Auto transfer for 1 to 32 bytes), 1 channel
Incorporated 8-bit, 10-stage FIFO
(Auto transfer for 1 to 10 bytes), 1 channel
8-bit clock synctype (MSB/LSB first selectable), 1 channel
 - Timer 8-bit timer, 8-bit timer/counter, 19-bit time base timer,
16-bit capture timer/counter, 32kHz timer/counter
 - I²C bus interface
 - Remote control reception circuit 8-bit pulse measurement counter, 6-stage FIFO
 - PWM output circuit 12 bits, 2 channels
- Interruption 21 factors, 15 vectors, multi-interruption possible
- Standby mode SLEEP/STOP
- Package 80-pin ceramic PQFP

Note) Mask option depends on the type of the CXP84600. Refer to the Products List for details.

Structure

Silicon gate CMOS IC

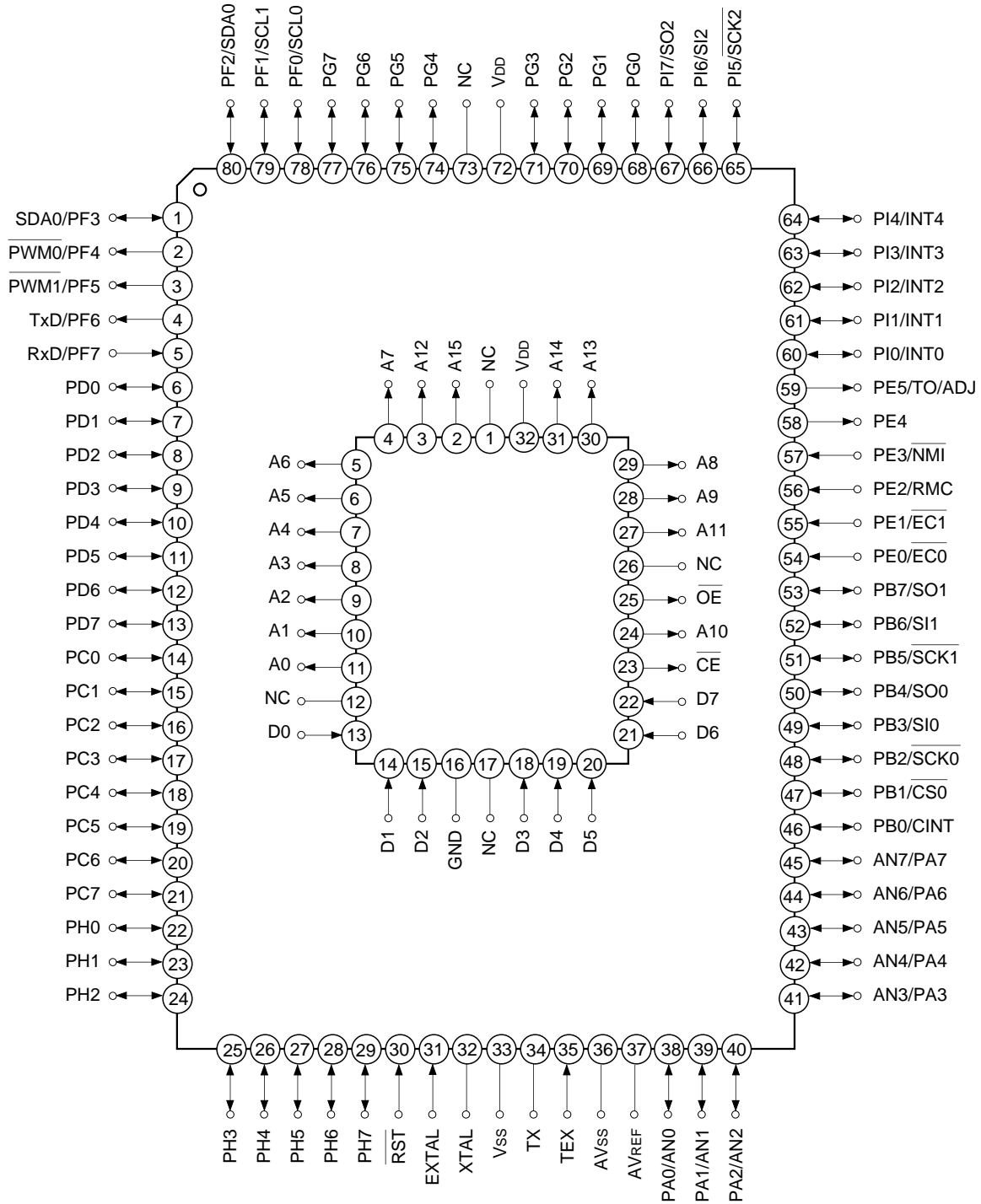
80 pin PQFP (Ceramic)



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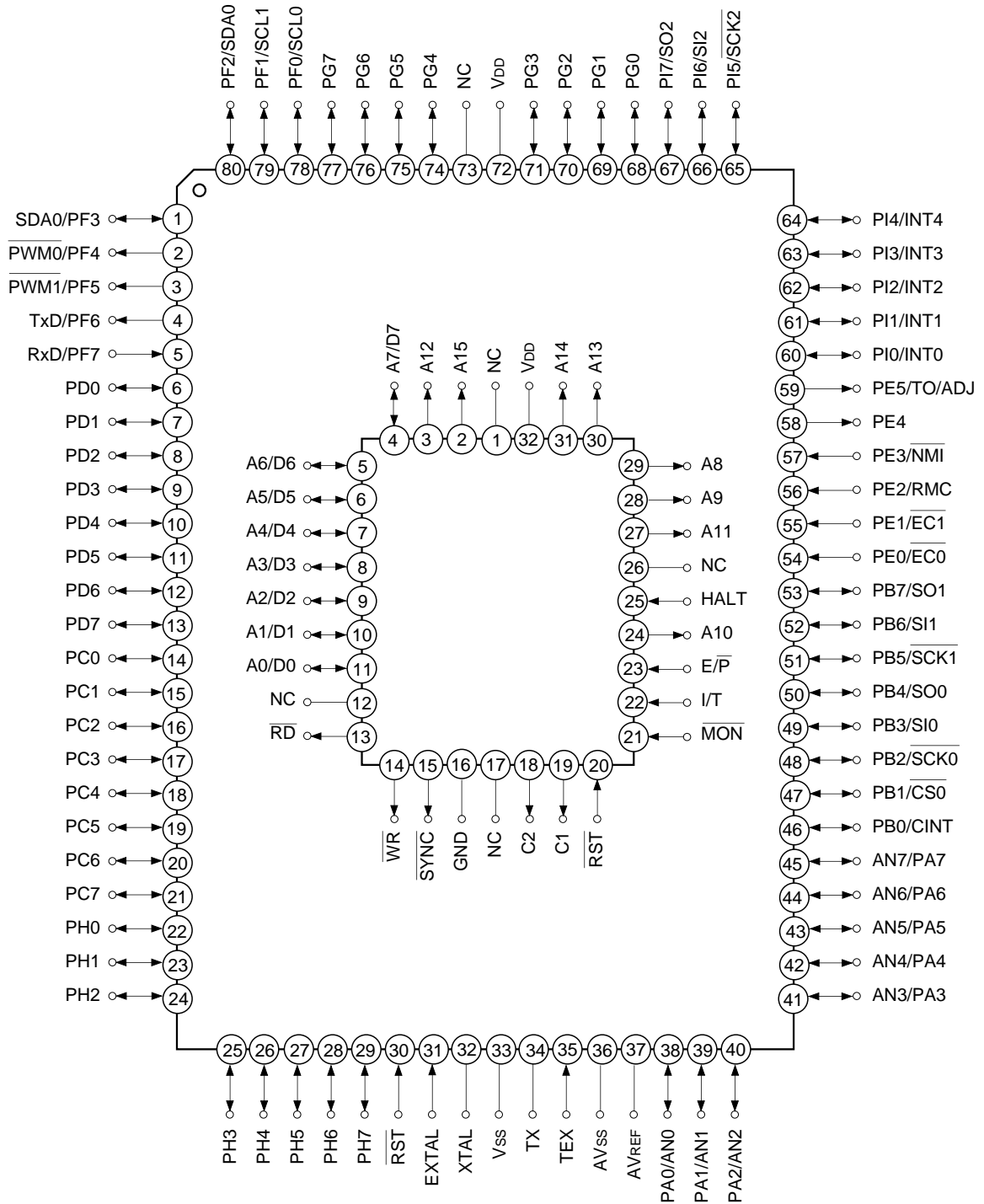
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Pin Assignment in Piggyback Mode



Note) NC (Pin 73) is always connected to V_{DD}.

Pin Assignment in Evaluator Mode



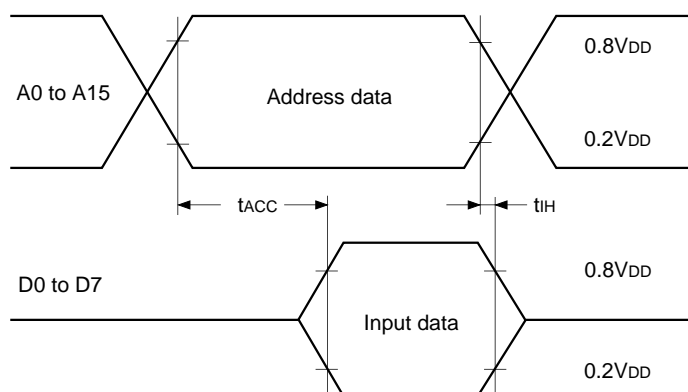
Note) NC (Pin 73) is always connected to VDD.

EPROM Read Timing ($T_a = -20$ to $+75^\circ\text{C}$, $V_{DD} = 3.0$ to 5.5V , $V_{SS} = 0\text{V}$ reference)

Item	Symbol	Pin	Min.	Max.	Unit
Address → data input delay time	t_{ACC}	A0 to A15 D0 to D7		100*1	ns
				75*2	
Address → data hold time	t_{IH}	A0 to A15 D0 to D7	0		ns

*1 At 12MHz operation ($V_{DD} = 4.5$ to 5.5V)

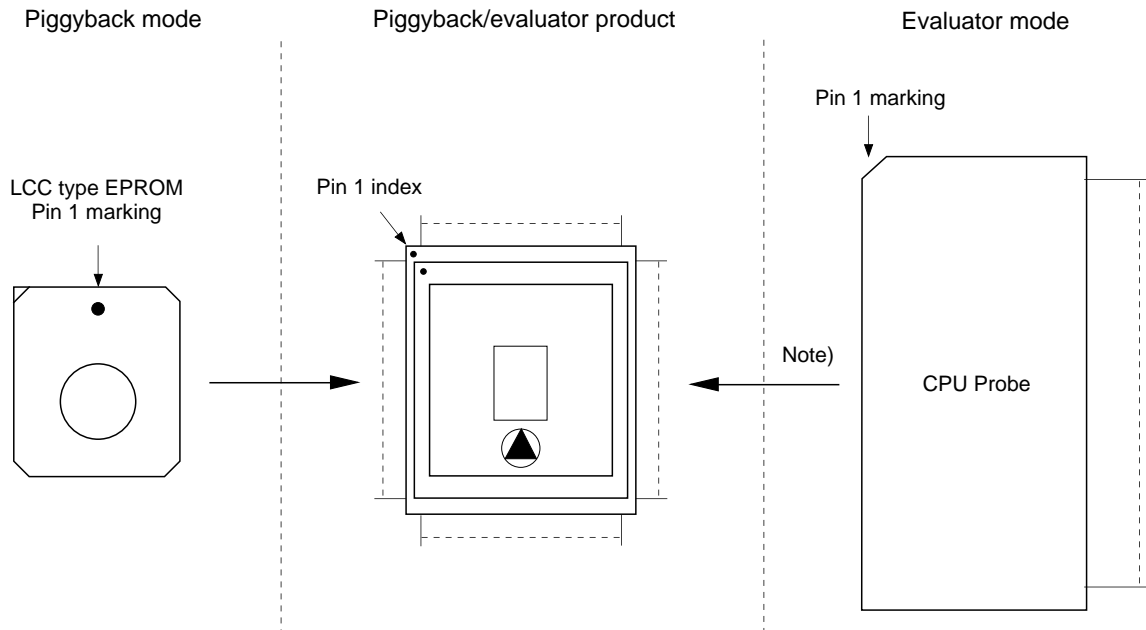
*2 At 12MHz operation ($V_{DD} = 3.0$ to 5.5V), At 16MHz operation ($V_{DD} = 4.5$ to 5.5V)



Products List

Option item	Products			
	Mask			Piggyback/evaluator
	CXP84632	CXP84640	CXP84648	CXP84600-U01Q
Package	80-pin plastic QFP			80-pin ceramic QFP
ROM capacity	32K bytes	40K bytes	48K bytes	EPROM 60K bytes
Reset pin pull-up resistor	Existent/Non-existent			Existent

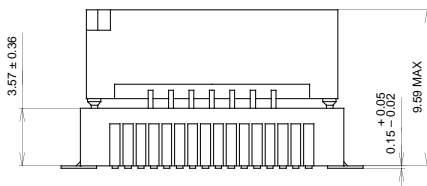
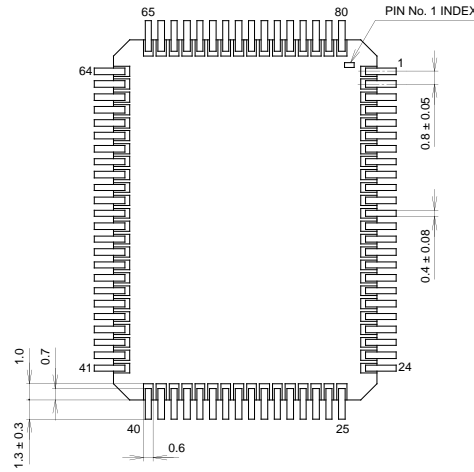
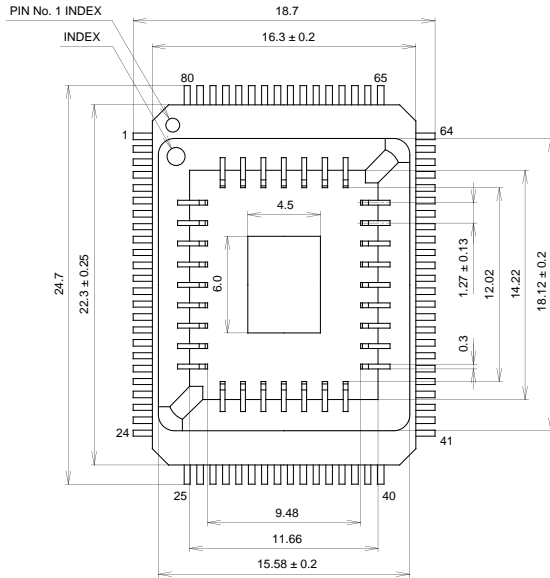
Piggyback mode/evaluator mode can be switched as shown below.



Note) Evaluation cap should be connected to CPU probe.

Package Outline Unit: mm

80PIN PQFP (CERAMIC)



PACKAGE STRUCTURE

SONY CODE	PQFP-80C-L01
EIAJ CODE	ACFP080-C-0000-A
JEDEC CODE	—————

PACKAGE MATERIAL	CERAMIC
LEAD TREATMENT	GOLD PLATING
LEAD MATERIAL	42 ALLOY
PACKAGE WEIGHT	5.7g



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